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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,025	08/16/2006	Yixin Wang	VDX5006USPCT	5348
27777 7590 09/16/2010 PHILIP S. JOHNSON JOHNSON & JOHNSON ONE JOHNSON & JOHNSON PLAZA NEW BRUNSWICK, NJ 08933-7003				
EXAMINER BAUSCH, SARAE L				
ART UNIT 1634		PAPER NUMBER		
NOTIFICATION DATE 09/16/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/567,025

**Applicant(s)**

WANG ET AL.

**Examiner**

SARAE BAUSCH

**Art Unit**

1634

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-56, 65-92, 101-129 and 137-221 is/are pending in the application.
- 4a) Of the above claim(s) 2, 4, 5, 35-56, 65-72, 74, 76, 77, 107-129 and 137-221 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6-34, 73, 75, 78-92, 101-106 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-840)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Currently, claims 1-56, 65-92, 101-129, and 137-221 are pending in the instant application. Claims 2, 4, 5, 35-56, 65-72, 74, 76, 77, 107-129 and 137-221 have been withdrawn from consideration as being drawn to a nonelected invention. All the amendments and arguments have been thoroughly reviewed but were found insufficient to place the instantly examined claims in condition for allowance. The following rejections are reiterated from the previous office action. Any rejection not reiterated below has been withdrawn due to the amendment to the claims. Response to arguments follow. This action is FINAL.
2. It is noted that applicant indicates claims 1, 3, 6-10, 12-20, 29-32, 73, 75, 78-92 and 101-106 are withdrawn however these claims are under examination with respect to the elected combination of L1CAM and PLAB. Since the reply filed on 06/29/2010 appears to be bona fide and it is clear applicants intent, in the interest of compact prosecution the pending claims have been examined. However for any response to this office action to be fully responsive applicant is required to include the proper status identifiers for the claims. Additionally if any changes are made tot the claims the proper markers to indicate the changes to the claims are required. Applicant is reminded that in order to comply with 37 CFR 1.121 all changes to the claims must have proper markings and proper status identifiers.

***Election/Restrictions***

3. Applicant's election without traverse of group I and the combination of L1CAM and PLAB in the reply filed on 06/26/2009 is acknowledged.
4. Claims 2,4,5,35-56,65-72,74,76,77,107-129 and 137-221 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being

no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/26/2009.

5. Claims 1, 3, 6-34, 73, 75, 78-92, and 101-106 are under examination of the elected gene combination of L1CAM and PLAB, SEQ ID NO 1 and 2. Additionally PCR products, SEQ ID NO 25 and 26 are under examination for claim 22. It is noted the claims 1-20, 29-32, 37-56, 65-70, 73-92, 101-106, 109-129, and 137-142 linked the inventions of group I and II and the claims that read on the elected gene combination of L1CAM and PLAB are under examination.

### ***Maintained Rejections***

#### ***Claim Rejections - 35 USC § 112- 2<sup>nd</sup> Paragraph***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 83-90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 83 recites the limitation "the specificity" and "the sensitivity" in lines 1-2 of claim 83. There is insufficient antecedent basis for this limitation in the claim.

### ***Response to Arguments***

8. The response asserts that the claims have been amended so that they refer to the sensitivity and specificity of the measurements of the over-expressed genes of the assay/methods. It is noted that claims 83-90 have not been amended and thus the rejection is maintained.

***Claim Rejections - 35 USC § 112- 1st Paragraph***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1, 3, 6-34, 73, 75, 78-92, and 101-106 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Factors to be considered in determining whether a disclosure meets the enablement requirement of 35 USC 112, first paragraph, have been described by the court in *In re Wands*, 8 USPQ2d 1400 (CA FC 1988). *Wands* states at page 1404,

“Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized by the board in *Ex parte Forman*. They include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.”

**The nature of the invention and the breadth of the claims**

The claims are drawn to methods for identifying a melanoma and distinguishing a malignant melanocyte from a benign melanocyte in a tissue sample by measuring the expression

level of PLAB and L1CAM wherein the expression level above pre-determined cut-off levels indicate the presence of melanoma in a sample. Additional claims further limit the melanoma to micro metastasis and limit specificity and sensitivity to detect metastasis as well as limit the pre-determined cut-off level to be at least two fold over-expression.

Dependent claims are limited to a sample that is a lymph node, obtained from a biopsy or inter-operatively and gene expression measured on a microarray or by PCR and PCR product detected is SEQ ID NO 25-26. Additional dependent claims comprise measuring expression of a gene constitutively expressed in the sample, reducing melanin in a sample and extracting RNA from a sample.

The claims encompass analysis of any human or non-human subject and any type of sample. The claims encompass using L1CAM and PLAB in any manner with a pre-determined cut-off value which includes analysis of any level of gene expression, any sample, any comparison to any control or any undisclosed pre-determined cut-off value for the diagnosis of melanoma, including micro metastasis and metastasis.

The nature of the claimed invention thus requires knowledge of a robust and reliable correlation between gene expression levels in different sample types from both human and non-human and the presence of melanoma to determine diagnosis, as well the ability to determine the stage and severity of melanoma including metastatic melanoma, as well as determine benign melanocyte, or normal tissue based on the expression levels of PLAB and L1CAM.

#### **Guidance in the Specification and Working Examples**

The specification teaches analysis of gene expression of malignant melanoma, benign skin nevi, and normal skin tissues to determine differentially expression genes in malignant melanoma. The specification teaches analysis of RT-PCR analysis of PLAB and L1CAM in samples of malignant melanoma, benign nevi, melanoma LN metastasis, and melanoma-free lymph node samples (see pg. 3-4). The specification teaches analysis of melanoma and benign nevi primary tissue for microarray analysis including 45 primary malignant melanoma, 18 benign skin nevi, and 7 normal skin tissues in addition to analysis of 77 malignant melanoma LN metastasis and 18 melanoma-free LN samples for PCR analysis. The specification provides expression analysis and identified genes with a  $p < .05$  and fold change of at least 2 (see pg. 32) and teaches that L1CAM and PLAB had a greater than 10 fold change between melanoma, benign nevi and normal skin samples (See table 9). Analysis was then determined in primary melanoma and melanoma LN metastasis, benign melanocytes, and normal samples by RT-PCR of L1CAM and PLAB (see ex 7).

None of the examples in the specification teach analysis of diagnosing an individual with having or not having melanoma, or demonstrating the ability to distinguished based on expression analysis the different stages of melanoma. The specification merely provides a study to determine L1CAM and PLAB are markers genes indicating increased risk of melanoma. The specification does not provide for the analysis of any type of control sample other than benign nevi or normal skin nor does analysis in any other type of subject other than human, the specification merely demonstrate L1CAM and PLAB are associated with increased risk of melanoma. The specification does not teach a representative number of species analysis of melanoma associated expression analysis of L1CAM and PLAB (cat, dog, horse, cow, etc).

The specification does not teach nor provide guidance that amount of expression level necessary that will be predictive of diagnosis or stage of melanoma in any human or non-human. The specification does not provide guidance that any amount of increase or decrease based on any predetermined cut off value will be predictive of diagnosis and staging of melanoma, as predictably association expression level to diagnosis or staging of a disease is highly unpredictably.

**State of the art, level of skill in the art, and level of unpredictability**

While the state of the art and level of skill in the art with regard to determining the level of any particular transcription product is high, the unpredictability associated with correlating any compared level with a particular phenotype such as identifying melanoma or metastasis of melanoma is even higher. Such unpredictability is demonstrated by the prior art, the post-filing art, and the instant specification.

The claims encompass the use of any amount of an increase or decrease in level of gene expression of PLAB and L1CAM as compared to any control of a pre-determined cut off value for the diagnosis and determination of metastasis of melanoma in any sample from human or non-human subjects, however the prior art teaches that determination of diagnosis of melanoma and metastasis of melanoma based on expression analysis is unpredictable.

McMasters (2003, cited on IDS), teaches that RT-PCR analysis may be useful tool for staging of melanoma but that there are many limitations and a diagnostic test must be sensitive but have greater specificity (see pg. 336). McMasters warns that several important issues remain to be resolved before RT-PCR analysis can be used for clinical decision making including



standardization and optimization of techniques and includes the best combination of markers to obtain optimal balance between sensitivity and specificity, which has yet to be defined (see pg. 337). The specification does not provide any guidance that the markers of PLAB and L1CAM are specific.

Additionally, the art teaches that gene expression analysis is commonly used for three different purposes: (1) as a screening tool to identify individual genes of interest that might contribute to an important biological function, (2) to obtain insight into an important biological function, and (3) as a classification tool to sort cases into clinically important categories (Pusztai and Hess, *Annals of Oncology*, Vol. 15, pages 1731-1737, 2004; e.g., paragraph bridging pages 1732-1733). In the instant case, the specification uses gene expression analysis to determine a PLAB and L1CAM are associated with an increased risk of melanoma, however the claims are drawn to using gene expression analysis to diagnose and determine the stage of melanoma. The specification does not teach that the analysis of expression of the genes L1CAM or PLAB will diagnosis or determine the severity of melanoma. The specification merely provides an analysis of expression levels in samples obtained from patients already diagnosed with melanoma, however the claims are drawn to diagnosis and determining of staging and the specification does not provide guidance how to classify a subject as having melanoma or determine the stage of melanoma in any human or non-human subject. Pusztai and Hess teach that validation of gene expression important to biological function may be validated by using different methods, such as RT-PCR, whereas the most appropriate validation for using gene expression analysis as a classification tool is testing the predictor on independent sets of cases (e.g., page 1733, left column, 1<sup>st</sup> full paragraph). In the instant case the specification does not test L1CAM and PLAB

on independent sets of cases. However post filing art does evaluate the marker L1CAM and PLAB on independent sets of cases and is unable to identify melanoma by expression of L1CAM and PLAB.

The prior art reveals that differences in gene expression observed between two groups do not necessarily provide markers that can be used to reliably classify a subject and thus diagnosis melanoma or determine metastasis of melanoma. Golub et al (Science, Vol. 286, pages 531-537, October 1999) teach the use of a two-step procedure to test the validity of gene expression levels as predictors: step 1 involves cross-validation of the predictors on the initial data set, where one withholds a samples, builds a predictor based only on the remaining samples and predicts the class of the withheld sample; step 2 involves the repetition of assessing the clinical accuracy of the predictor set on an independent set of samples (e.g., page 532, right column). Although Golub et al could detect gene expression differences between chemotherapy responders and non-responders, those differences could not be use to predictably classify individuals (e.g., page 533, paragraph bridging left and middle columns). Accordingly, the art demonstrates the unpredictable nature of extrapolating gene expression differences to a method of class prediction.

Additionally, post filing art could not predictably identify melanoma by expression analysis of L1CAM and PLAB. Hilari et al. (Ann Surg Oncol (2009), 16:177-185) teach evaluating prognostic potential of qRT-PCR in melanoma patients using specific markers. Hilari teaches PLAB and L1CAM were evaluated for melanoma specificity but not for sentinel lymph node analysis. Hilari teaches that PLAB and L1CAM did not differentiate between malignant melanoma and benign melanocytes or lymph nodes in their analysis and conclude that LAB and L1CAM are not possible markers for melanoma metastasis to SLNs (see abstract). Hilari teaches

using applicants own primers and probes for L1CAM and PLAB and evaluating a set of benign nodes, positive nodes, RNA from melanocytes, and RNA from ski. Hilari demonstrates that no discriminatory power between benign versus positive nodes or between benign nevi/normal skin versus positive nodes using the markers L1CAM and PLAB(see pg. 180 and figure 2) and thus concludes that these markers are not useful for staging of melanoma SLNs. The teaching of Hilari demonstrate the unpredictability of reproducing expression analysis data in different data sets with the ability to classify an individual as having melanoma or determining stage of melanoma.

#### **Quantity of experimentation required**

A large and prohibitive amount of experimentation would be required to make and use the claimed invention. Given the lack of guidance in the specification, one would have to perform large case: control analyses to determine PLAB and L1CAM expression levels, as compared to any control level in any type of sample, is in fact diagnostic and predictive of staging of melanoma as recited in the claims, which would include validation studies. Such experimentation would be required for any control sample in any species, human or non-human, as encompassed by the claims. Even if such experimentation were to be performed, there is no assurance that the association asserted in the specification would be repeated and shown to be robust and reliable as demonstrated by Hilari.

#### **Conclusion**

Taking into consideration the factors outlined above, including the nature of the invention and breadth of the claims, the state of the art, the level of skill in the art and its high level of unpredictability, the lack of guidance by the applicant and the particular examples, it is the

conclusion that an undue amount of experimentation would be required to make and use the claimed invention.

***Response to Arguments***

11. The response traverses the rejection on pages 20-22 of the remarks mailed 06/29/2010. The response asserts that PCR for detecting gene expression is well known and a preferred PCR assay is described in example 7, pg 48, cut off values are described on page 46 and pg 48, correlation between over expression of two genes and melanoma is described on pg 27, 44, and 48, and correlation of PLAB and L1CAM and melanoma is described on pg. 10 and pg 27 and the PCR assay was valued in example 6. The response asserts that this describes how to make and use the invention. It is noted that the claims are not drawn to determining increased risk of melanoma but are drawn to identifying, diagnosing, and staging any type of melanoma in any type of tissue sample. The specification on page 10, 19, 27, and 44 describe general methodology. For example pg 10 describes generally the requirements for specificity to detect melanoma, pg 19 describes the genes of PLAB, L1CAM, pg 27 describes the tissue preparation, and none of these citations describe the association that PLAB and L1CAM identify melanoma or metastasis of melanoma in human or non-human, as the claims broadly recite. Claim 21 has been amended to recite human subject however the specification does not describe nor provide evidence that the expression level of PLAB and L1CAM would accurately identify and diagnosis melanomam, as evidenced by the post filing art. The specification teaches in example 7 the PCR analysis of L1CAM and PLAB however the specification does not validate the markers PLAB and L1CAM on an independent set of cases to predictably associate and provide guidance that PLAB and L1CAM will predictably identify melanoma. Furthermore, the post filing art

evaluated the marker L1CAM and PLAB and demonstrate that L1CAM And PLAB could not predictably identify melanoma, as demonstrated by Hilari et al. Hilari specifically teaches that L1CAM and PLAB are not possible markers for melanoma or staging melanoma. Thus although the specification provides guidance on how to perform PCR expression analysis in a tissue sample to determine expression levels of PLAB and L1CAM, the specification does not provide guidance on to predictably associate the expression of PLAB and L1CAM with identifying, diagnosing, and staging melanoma. As evidence by the post filing art, Hilari demonstrated the unpredictability of associating expression analysis of PLAB and L1CAM with melanoma and thus the undue experimentation that would have been required at the time of filing to determine that PLAB and L1CAM identifies melanoma in a sample.

The response asserts that the claims to non-human sampling need not be considered in view of the amendment provided above. This response has been thoroughly reviewed but not found persuasive. The claims are not limited to human, see for example claim 1 and claim 73. Thus the breadth of the claims encompass both humans and non-humans.

The response asserts that a robust correlation is required between expression and melanoma. The response asserts its unclear what constitutes such a correlation but whatever robust might be it is not required. The response asserts that the correlation is a reasonable one and is provided by demonstrating differentiation of melanoma from benign conditions using standard tests of statistical significance and correlation with diagnostic tests that are being used in the clinical practice. This response has been thoroughly reviewed but not found persuasive. The specification provides guidance to determine expression analysis of L1CAM and PLAB however the post filing art reference of Hilari demonstrates that undue experimentation would

have been required to determine that expression of LICAM and PLAB identifies melanoma as Hilari provide evidence that LICAM and PLAB are not associated with melanoma and can not identify melanoma thus demonstrating the unpredictability and undue experimentation required at the time of filing to determine LICAM and PLAB expression identifies melanoma in any subject.

The response further asserts that it is not clear where the examiner's assertion about determining the stage and severity of benign melanocyte or normal tissue comes from. The response asserts that the claimed invention must be enabled not to some other aspect of the invention and asserts that identifying melanoma is enabled whether it is determining stage and severity. This response has been thoroughly reviewed but not found persuasive. The claims are drawn to identifying melanoma and identifying metastasis, which encompasses determining any type of melanoma including benign melanocyte, metastasis and micrometastasis and determining metastasis encompasses identifying stages. Furthermore claim 73, required distinguishing a malignant melanocyte from benign melanocyte, thus encompassed by stage or severity. As stated in the rejection above, Hilari demonstrates that at the time of filing, it would have been undue experimentation to use the expression level of PLAB and LICAM to identify melanoma as Hilari demonstrates that PLAB and LICAM expression does not predictably identify melanoma.

The response asserts that the examiner misconstrues that the claims include any amount of increase or decrease as the claims encompass a pre-determined cut-off. This response has been reviewed but not found persuasive. The claims require measuring gene expression levels, thus the level of gene expression can be any increase or decrease relative to a control and pre-

determine cut-off. It is noted that the claims do not limit the pre-determine cut-off and thus this level can be any level. Although the claims recite the expression be above the cut-off limit when the melanoma is identified, which is a correlation step, none of the active process steps require that the expression level determined is only above a pre-determined level.

The response asserts that McMaster is not relevant to the issue of the claimed invention as McMaster describes the unpredictability of PCR as a tool for staging. This response has been reviewed but not found persuasive. The claims require identifying melanoma and identifying metastasis melanoma, thus the claims encompass determining different levels of melanoma, which would be encompassed staging an individual as staging encompasses determining if metastasis is present, which is encompassed and recited in the dependent claims.

The response asserts that Hilari teaches away from the very thing the inventors have discover and this is a case of nonobviousness and has no bearing on enablement. The response asserts that Hilari can not be used to show the inventors did not teach how to make and use the claimed invention. The response asserts that the specification teaches methods that are used to establish a correlation between markers and presence of melanoma which is well accepted. This response has been thoroughly reviewed but not found persuasive. Hilari can be used to show that as of an applications filing date undue experimentation would have been required. Specifically, MPEP 2124 states that references cited to show a universal fact need not be available as before applicant's filing date, such facts include characteristics or properties of a material or a scientific truism. Thus the asserted characteristic or property that expression of PLAB and L1CAM identifies melanoma and metastatic melanoma would require undue experimentation to perform as Hilari demonstrates and provides the evidence that PLAB and

L1CAM, at the time of filing would require further experimentation to determine if the expression would identify melanoma and metastatic melanoma because Hilari provides evidence that at the time of filing, the expression of L1CAM and PLAB did not identify melanoma or metastatic melanoma.

For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

### ***Conclusion***

12. No claims are allowable.
13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAE BAUSCH whose telephone number is (571)272-2912. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nguyen can be reached on (571) 272-0731. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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/Sarae Bausch/  
Primary Examiner, Art Unit 1634